

AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims, in which claims 32 and 34 are canceled without prejudice or disclaimer, claims 1, 10, 17, 22, 33, and 35 are currently amended, and claim 36 is newly presented.

1. (Currently Amended) An apparatus for managing call billing records for users of a signaling network operative to carry user calls, comprising:

a gateway interfacing the signaling network with an Internet Service Provider and a local exchange carrier and operative to collect call billing data from the signaling network in a first data structure format; and

a network processor operative to:

receive the collected call billing data in the first data structure format from the gateway,

convert the collected call billing data from the first data structure format to a second data structure format, ~~and~~

access a directory of call event records associated with the call billing data in the first data structure within the gateway;

generate an output file representing the call billing data in the second data structure based on the call event records, wherein the second data structure includes default values for header fields and trailer fields; and

transmit the ~~call billing data in the second data structure format~~ output file to a data network for billing processing by a co-carrier access billing system for settlement with the Internet Service Provider and the local exchange carrier.

2. (Original) The apparatus of claim 1 wherein the gateway comprises a signaling gateway.

3. (Previously Presented) The apparatus of claim 1 wherein the network processor comprises an interface that mates with a communication link coupled to the gateway.

4. (Previously Presented) The apparatus of claim 1 wherein the network processor is further operative to poll the gateway to collect the collected call billing data in the first data structure format.

5. (Canceled)

6. (Original) The apparatus of claim 1 wherein the second data structure format comprises data in a Bellcore automatic message accounting (AMA) format.

Cont.
7. (Previously Presented) The apparatus of claim 1 wherein the data network is configured to periodically receive the call billing data in the second data structure format for billing processing.

8. (Original) The apparatus of claim 7 wherein the data network comprises a local traffic system (LTS), and wherein the second data structure format comprises an industry standard automatic message accounting (AMA) format.

9. (Previously Presented) The apparatus of claim 1 wherein the network processor comprises a network platform.

10. (Currently Amended) A system for managing call billing records for users of a signaling network, comprising:

a signaling network having communications capabilities to carry user calls;

a signaling gateway interfacing the signaling network with an Internet Service Provider and a local exchange carrier and operative to collect call billing data resulting from the calls in a first data structure format;

a communication link coupled to the signaling gateway; and

a network processor communicating with the signaling gateway via the communication link and with a data network and operative to:

convert the collected call billing data from the first data structure format to a second data structure format conducive to conducting billing processing ~~and~~ ;

access a directory of call event records associated with the call billing data in the first data structure;

generate an output file representing the call billing data in the second data structure based on the call event records, wherein the second data structure includes default values for header fields and trailer fields; and

transmit the ~~call billing data in the second data structure format~~ output file to the data network for billing processing by a co-carrier access billing system for settlement with the Internet Service Provider and the local exchange carrier.

11. (Previously Presented) The system of claim 10 wherein the data network is operative to periodically receive the call billing data in the second data structure format for billing processing.

12. (Previously Presented) The system of claim 10 wherein the network processor is operative to poll the gateway to collect the collected call billing data in the first data structure format.

13. (Previously Presented) The system of claim 12 wherein the network processor is operative to poll the gateway at preset intervals.

14. (Previously Presented) The system of claim 10 wherein the data network is configured to receive the call billing data in the second data structure format for billing processing.

15. (Previously Presented) The system of claim 14 wherein the data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message account (AMA) structure code 625 format that is used to implement billing processing.

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16. (Original) The apparatus of claim 10 wherein the network processor includes an interface coupled with the communication link operative to mate the network processor with the signaling gateway.

17. (Currently Amended) A method of managing call billing records of users of a signaling network operative to carry user calls, comprising:

collecting call billing data with the first computer device in a first data structure format at a first computer device, said first computer device interfacing the signaling network with an Internet Service Provider and a local exchange carrier;
transferring the call billing data from the first computer device to a second computer device;
converting the call billing data at the second computer device from the first data structure format to a second data structure format; ~~and~~

accessing a directory of call event records associated with the call billing data in the first data structure;

generating an output file representing the call billing data in the second data structure based on the call event records, wherein the second data structure includes default values for header fields and trailer fields; and

~~transmitting the call billing data in the second data structure format~~ output file to a data network for billing processing by a co-carrier access billing system for settlement with the Internet Service Provider and the local exchange carrier.

18. (Previously Presented) The method of claim 17 wherein the first computing device includes a signaling gateway.

19. (Previously Presented) The method of claim 17 wherein the second computer device includes a network processor.

20. (Previously Presented) The method of claim 17 wherein the step of transferring includes transferring the call billing data in accordance with a file transfer protocol.

21. (Previously Presented) The method of claim 17 wherein the step of transferring includes transferring the call billing data over a communication link provided between the first computer device and the second computer device.

22. (Currently Amended) A method of managing call billing records generated from usage within a signaling network by users, comprising:

collecting call billing data with a signaling gateway in a first data structure format, said signaling gateway interfacing the signaling network with an Internet Service Provider and a local exchange carrier;

transferring the call billing data from the signaling gateway to a network processor;

converting the call billing data with the network processor from the first data structure format to a second data structure format conducive to processing billing information; ~~and~~

accessing a directory of call event records associated with the call billing data in the first data structure format;

generating an output file representing the call billing data in the second data structure based on the call event records, wherein the second data structure format includes default values for header fields and trailer fields; and

transmitting the ~~call billing data in the second data structure format~~ output file to a data network for billing processing by a co-carrier access billing system for settlement with the Internet Service Provider and the local exchange carrier.

23. (Original) The method of claim 22 further comprising routing call billing data for a user via the network processor to a data network.

24. (Original) The method of claim 22 further comprising generating an invoice from the data network for delivery to individual users.

25. (Previously Presented) The method of claim 22 wherein the step of transferring includes transferring the call billing data using a file transfer protocol.

26. (Previously Presented) The method of claim 22 wherein the step of transferring includes transferring the call billing data via a communication link between the signaling gateway and the network processor.

27. (Original) The method of claim 22 further comprising generating an alarm signal with the network processor.

28. (Original) The apparatus of claim 1 wherein the local exchange carrier comprises an incumbent local exchange carrier.

29. (Original) The system of claim 10 wherein the local exchange carrier comprises an incumbent local exchange carrier.

30. (Original) The method of claim 17 wherein the local exchange carrier comprises an incumbent local exchange carrier.

31. (Original) The method of claim 22 wherein the local exchange carrier comprises an incumbent local exchange carrier.

32. (Canceled)

33. (Currently Amended) The apparatus of claim 32 1, wherein the network processor is further operative to:

maintain a counter of block sequence numbers for the gateway, wherein the default values of the header fields and the trailer fields include, respectively, the block sequence numbers to specify a first and last block in the output file.

34. (Canceled)

35. (Currently Amended) The method of claim 34 17, further comprising:

35 Cancelled
maintaining a counter of block sequence numbers for the first computer device, wherein the default values of the header fields and the trailer fields include, respectively, the block sequence numbers to specify a first and last block in the output file.

36. (New) A method for managing call billing records, the method comprising:

retrieving a directory of call event records associated with a call billing data in a first format,
the call event records being created by a local exchange carrier;
outputting a file representing the call billing data in a second format based on the call event records; and
transmitting the output file to a co-carrier access billing system for settlement with a data service provider and the local exchange carrier.
